

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/005797 A2

(51) International Patent Classification⁷: F01N 3/035,
3/20, 3/025, 3/08

ANDERSON, Mike [US/US]; 2817 106th Street West,
Bloomington, MN 55431 (US).

(21) International Application Number:
PCT/US2004/018536

(74) Agent: BRUESS, Steven, C.; Merchant & Could P.C.,
P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(22) International Filing Date: 10 June 2004 (10.06.2004)

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

Published:

(30) Priority Data:
60/478,679 12 June 2003 (12.06.2003) US

— without international search report and to be republished
upon receipt of that report

(71) Applicant (for all designated States except US): DON-
ALDSON COMPANY, INC. [US/US]; 1400 West 94th
Street, P.O. Box 1299, Minneapolis, MN 55440-1299 (US).

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(72) Inventors; and

(75) Inventors/Applicants (for US only): HOU, Xhixin,
Jason [CN/US]; 2572 Oakridge Court, Maplewood, MN
55119 (US). WAGNER, Wayne, M. [US/US]; 120 Red-
wood Drive, Apple Valley, MN 55124 (US). ZHANG,
Wenzhong [CN/US]; 13542 Foxberry Road, Savage, MN
55328 (US). STEINBRUECK, Edward, A. [US/US];
16671 N. Hillcrest Court, Eden Prairie, MN 55346 (US).
ANGELO, Theodore, G. [US/US]; 838 Idaho Avenue
West, St. Paul, MN 55117 (US). WIEGANDT, Ted, J.
[US/US]; 4126 Oakbrooke Curve, Eagan, MN 55112 (US).

WO 2005/005797 A2

(54) Title: METHOD OF DISPENSING FUEL INTO TRANSIENT FLOW OF AN EXHAUST SYSTEM

(57) Abstract: A system or method for controlling the delivery of fuel into the transient flow of an exhaust system to control emissions. A mathematical model representative of the exhaust system can be used to determine, based on operating conditions of the exhaust system, a rate of fuel delivery suitable for achieving a desired result. The desired result can be to increase the temperature of a diesel particulate filter to a temperature suitable for regeneration without exceeding a temperature that may damage the diesel particulate filter.